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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/874,036	06/06/2001	Takashi Yamaguchi	108419-00020	7608

7590 12/12/2002  
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Washington, DC 20036-5339

EXAMINER
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GARBER, CHARLES D

ART UNIT	PAPER NUMBER
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2856

DATE MAILED: 12/12/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/874,036

Applicant(s)

YAMAGUCHI ET AL.

Examiner

Charles Garber

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5 and 7-9 is/are pending in the application.
- 4a) Of the above claim(s) 7-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4 and 5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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### **DETAILED ACTION**

#### ***Response to Amendment***

The amendment filed 11/12/2002 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The second predetermined pressure lower than the second predetermined pressure of amended claims 1 and 4 is not supported in the original disclosure. Paragraph 0017 of the disclosure recites "a second predetermined negative pressure lower than the predetermined pressure", however, "the predetermined pressure" of the original disclosure is not equivalent to the first predetermined pressure now recited in the claims. "The predetermined pressure" of the original disclosure is a pressure PREF that the pressure within the system rises to due to leaking or fuel evaporation after the pressure has been lowered to a "predetermined negative pressure" POBJ. The disclosure does not recite that the "predetermined negative pressure" or "second predetermined negative pressure" are any different and in fact the figures indicate they are both equal to POBJ.

Applicant is required to cancel the new matter in the reply to this Office Action.

#### ***Response to Arguments***

Applicant's arguments with respect to claims 1 and 4 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Rejections - 35 USC § 103***

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Busato et al. (US Patent 5,957,115) in view of Matsumoto et al. (US Patent 5,750,888).

Busato discloses a pulse interval leak detection system (title) for a vehicle emission system including fuel tank 2 and vapor collection canister 1 which supplies the evaporative fuel absorbed in the canister to an intake manifold 6 of an internal combustion engine. The leakage detection system includes pressure sensor 14 which is pressure detection means for detecting pressure within the evaporative fuel system; a canister purge solenoid valve 8 which is pressure reduction means for reducing the pressure within the evaporative fuel processing system until the detected pressure within the evaporative fuel processing system becomes equal to a predetermined negative pressure shown in figure 4 as an upper regulating limit.

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Negative pressure is introduced from the intake system by the purge valve 8 (column 4 lines 28-36). When the pressure sensor senses that the URL has been reached the purge valve is operated closed. This is shown in figure 4 as the "Initial Pressurization Time" and ends at time equal 5 seconds in the example. If a leak is present, vacuum begins to be lost. When the vacuum sensed by the pressure sensor reaches the Lower Regulating Limit (LRL) the computer commands the purge valve to open which causes vacuum to increase again to the URL.

This is equivalent to the "negative pressure introduction means for further reducing the pressure within the evaporative fuel processing system until the detected pressure becomes equal to a second predetermined negative pressure (URL) lower than the "predetermined negative pressure" (LRL) "by introducing the negative pressure from the intake system" (under the predetermined condition wherein the pressure reaches a LRL) after the pressure reduction by said pressure reduction means as in the instant invention (see figures 3 and 4 and column 5 lines 10-21).

Computer 12 is considered to be equivalent to leakage determination means for determining that there is a leak in the evaporative fuel processing system. Busato, however, determines a leak based on cycling the pressure between fixed pressure and using the resultant cycle time to differentiate between leak (leak size), and no leak. The instant invention on the other hand determines a leak based on detected pressure exceeding a reference value.

Examiner takes Official Notice that two basic types of tests are widely known and advantageous alternatives in pressure decay type leak testing. The first measures time

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during a predetermined pressure change and compares the measured time to a threshold or allowable value. The second measures pressure change during a predetermined time change and compares the measured pressure change to a threshold or allowable value. Matsumoto offers these obvious alternatives in a leak test method where "The rate of increase of the detected levels may be determined on the basis of a variation in the internal pressure within a predetermined period of time, or on the basis of a period of time required to achieve a predetermined amount of variation in the internal pressure." Busato teaches the first, however, the second well known alternative may have the advantage of ensuring the test is completed in a certain time assuring the test does not continue without finality which would have been obvious to one having ordinary skill in the art at the time the invention was made.

As for claim 2 Busato discloses the effectiveness of the inventive system and method is predicated on reasonable stability of the pressurizing source. Stability may be defined as the state or quality of being stable, especially constancy of character; steadfastness. Examiner considers that Busato is therefore disclosing the advantage of using a constant pressure source in such a test. In the case of a negative pressurization system, Busato recommends a pressure regulating purge valve as in US Patent 5,069,188 which inherently provides a constant flow rate at idle speeds or constant rate at any given duty beyond idle (column 6 lines 9-21).

Claims 4 and 5 are considered to be substantively equivalent to claims 1 and 2 discussed above.

### ***Conclusion***

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Garber whose telephone number is (703) 308-6062. The examiner can normally be reached on 6:30 a.m. to 3:00 p.m..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (703) 305-4705. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7725 for regular communications and (703) 308-7725 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4900.

cdg  
December 4, 2002

  
DANIEL S. LARKIN  
PRIMARY EXAMINER